



Quick Review

You can use the same order of operations for decimals as you can for whole numbers.

Here is the order of operations.

- Do the operations in brackets first.
- Then divide and multiply, in order, from left to right.
- Then add and subtract, in order, from left to right.

Practice

1. Evaluate.

a) $1.2 + 3.1 \times 2 - (2.7 + 0.6) \div 3$

$= 1.2 + 3.1 \times 2 - 3.3 \div 3$

$= 1.2 + 6.2 - 1.1$

$= 6.3$

Calculate in brackets.

Multiply and divide from left to right.

Add and subtract from left to right.

b) $9.9 + 5 \times 4.6$

$= 9.9 + 23$

$= 32.9$

c) $(6.2 - 2.6) \div 2 = 1.8$

2. Evaluate.

a) $7 \times (6 + 7.1) = 91.7$

b) $16 - 9.6 \div 3.2 = 13$

c) $5.8 + 12.3 \times 3 = 42.7$

d) $4.9 + 17.6 \div 8 = 7.1$

3. a) Evaluate each expression.

$$(5.3 + 7.5) \times (3 - 1) = \underline{25.6} \quad 5.3 + 7.5 \times 3 - 1 = \underline{26.8}$$

- b) The numbers and operations are the same in the two expressions in part a.
Explain why the results are different.

$$(5.3 + 7.5) \times (3 - 1) \quad 5.3 + 7.5 \times 3 - 1$$

$$= (12.8) \times (2) \quad = 5.3 + 22.5 - 1$$

$$= 25.6 \quad = 26.8$$

The use of brackets has changed the order of operations.

So, the results are different.

4. a) Evaluate each expression.

$$7.2 \times 4.2 + 3.4 = \underline{33.64} \quad (7.2 \times 4.2) + 3.4 = \underline{33.64}$$

- b) Explain the results.

The numbers and operations are the same in both expressions.

The use of brackets has not changed the order of operations. We still multiply first.

So, the results are the same.

5. Evaluate.

$$\text{a) } 3.6 \times 5 - 4.8 \div 4 + 10.2 = \underline{27} \quad \text{b) } (8.4 + 3.6) \div 6 \times 10 - 9.5 \times 2 = \underline{1}$$

6. A radio station contest used this skill-testing question: $4 + 6 \times 1.3 - 2.4 \div 2$.

Grace said the answer was 10.6. Rob said the answer was 5.3.

Who was correct? How do you know?

Grace was correct. She followed the order of operations and multiplied and divided

before adding and subtracting. Rob did not multiply and divide first, so his answer

was incorrect.